

SIGMA XI QUARTERLY

Vol. VII

JUNE, 1919

No. 2



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	University of Illinois, Urbana, Illinois
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	<i>Term expires January, 1920</i>
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	<i>Term expires January, 1923</i>

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SIGMA XI QUARTERLY

EDITORIAL COMMITTEE

Floyd Karker Richtmyer Edwin Emery Slosson
Henry Baldwin Ward

VOL. VII

JUNE, 1919

No. 2

EDITORIALS

EXECUTIVE COMMITTEE MEETING

The especial attention of members is directed to the records of the Executive Committee meeting, which form the leading article in this number. It is important that Chapters be familiar with items that have come before the committee and be prepared to express themselves with reference to matters under consideration. The pages of the Quarterly are open to discussions from Chapter members, and any articles are welcome that include proposals for the modification of procedure, or that are in any way concerned with advancing the purposes of the organization.

REORGANIZATION AFTER THE WAR

Men who have been serving the country in various scientific capacities are generally being released from their war duties, and are drifting back to the institutions in which their permanent work lies. They are keenly alive to the needs of research to solve the problems of the present. No one can doubt that the success of our country in the near future lies in the better development of investigation as a basis for activity in every line. This touches so intimately the object of our organization that Sigma Xi should play a prominent part in the work of reconstruction. One new plan for the encouragement of research is immediately before us—namely, the provision for a series of research fellowships to be granted to holders of the Ph.D. This plan, outlined sometime back by President Stieglitz, was held in abeyance during the war. It is incumbent upon us now to push it to its completion. The newly organized committee stands ready to receive suggestions and will welcome assistance of all kinds.

NEW CHAPTERS VS. CLUBS

In the interval during which certain amendments to the constitution have been pending, the Chapter roll of the organization has not been increased, and many institutions are anxiously looking for an opportunity to exercise the privileges and secure the advantages that come from membership in the organization. Possibly members themselves do not understand that those who are located in institutions where Chapters do not exist can have very large opportunities without any action whatever on the part of a convention, or any formality other than the definite organization of a Sigma Xi club. Such clubs have been formed in various parts of the country and were active before the war. While some of them inevitably suffered by the loss of members who were led to engage in war activities, the return of conditions to the normal will doubtless afford opportunity for calling the clubs again into activity, and organizing still others along the same line. Such groups have the same opportunities for meetings, discussions, addresses, and public influence that is given through the established Chapters. They, in fact, fall short of a Chapter only in the power to elect new members, which, by our constitution, is specifically reserved to those bodies which have been granted charters. To some it has seemed that the organization of a Sigma Xi club would be a most advantageous and effective manner of trying out any situation preliminary to making application for the granting of a charter. Experience only can show whether it is desirable in an individual location to continue the Sigma Xi club or to ask for the broader powers conferred by the granting of a charter. Meanwhile, groups of members, located in industrial centers or in college communities, might well consider the organization of a Sigma Xi club as a means of inspiration for themselves and of advancing Sigma Xi ideals.

SIGMA XI IDEALS

The attention of members is especially directed to the article, entitled "Chicago Ideals." It is published at the request of the University of Chicago Chapter and is an important contribution to our discussion concerning different types of membership. It is appropriate to add to this announcement the comment that, under the direction of this chapter, associate membership has come to be really significant. Persons thus elected feel themselves an actual element

in the society, and strive for the attainment of the standard that will justify their elevation to full membership. At least one has already achieved this end, even though the plan has been working but two years. The QUARTERLY will be glad to print articles bearing on the problems of the associate membership, and the actual results of the plan as it is being worked out in different institutions.

METHODS AND RESULTS

No movement can expect great results today unless it is adequately organized to accomplish the end sought. Machinery is as important in the achievement of results in the field in which the Sigma Xi is working as it is in the manufacturing line. It is not strange that those who are only partially familiar with the situation should be inclined to feel at times that our machinery had been too much elaborated, but no one can consider the membership of the organization, which has long since passed the 10,000 mark, and its range involving nearly the whole country and including institutions of very varied character, without recognizing the desirability of perfecting methods of procedure in order to accomplish our ends with the least expenditure of time and energy and the maximum of success. The Executive Committee, familiar with conditions in the various Chapters, alive to the necessity of forestalling as well as meeting criticisms that arise on every hand both inside and outside the organization, have been impressed with the marked efficiency which has been achieved at some points in our society and with the freedom from criticism associated with methods employed in certain places.

It is indeed natural that the Alpha Chapter, which was especially indicated in the remark above, should lead in the development of adequate methods, and the Executive Committee has recently requested the Chapter to forward to other Chapters blanks and reports indicating the methods of securing nominations and of handling the same. While conditions may be different in those institutions in which a smaller number of students affords opportunity for the individual member to know, personally, all candidates for membership, yet, it is certainly true that in our large institutions some such formal procedure is most advantageous, and the attention of Chapters is carefully directed to the documents sent them through the kindness of the Alpha Chapter.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

After due correspondence with the members President Stieglitz called the semi-annual meeting of the Executive Committee for April 26, 1919. The session was held at the Chemists Club, 50 East 41st Street, New York City. Members in attendance were President Stieglitz in the chair, Messrs. Ellery, Richtmyer and Ward. The Treasurer of the Society, Mr. Pegram met with the Committee. A telegram from Mr. McClung announced his unavoidable detention at the last moment. Mr. Eigenmann was on a scientific expedition in South America.

The report of the Treasurer for the year 1918 as audited by the officially appointed committee was read, approved and ordered printed.

The Secretary reported that urgent requests have been made to secure the privilege of printing in the QUARTERLY articles dealing with general matters and especially in connection with the campaign against venereal diseases. He stated that after conference with the President the following reply has been made to the government officials having the latter matter in charge.

"By explicit direction of the Executive Committee of the Society of the Sigma Xi and by repeated vote of the Convention the QUARTERLY is reserved exclusively for the special business of the Society and its chapters and may not include articles dealing with outside matters however interesting and important they may be.

"Both the officers and members of the Society have the greatest interest in the campaign of the Public Health Service for the suppression of venereal diseases, but undoubtedly all of them receive the pamphlets of the Public Health Service, know of the campaign, and are enlisted in it in connection with other organizations. It is proposed to bring the matter to the attention of the Executive Committee at the next meeting in order to give opportunity of revising previous action if there is a desire to do so." After deliberation and verification of the definite position taken by the Sigma Xi Conventions with reference to the purpose of the QUARTERLY the matter was passed without general action since it appeared that the statement made by the Secretary conformed to the instructions and intent of the Society.

The Committee took up unfinished business from the last meeting held in Chicago, May 10, 1918. It appeared that various matters had been held in abeyance by virtue of the devotion of members and institutions to war service.

Discussion brought out the fact that in the opinion of the members of the Committee the Society was face to face with the question of extending its influence to other countries through the establishment of foreign chapters. Various institutions in Canada, England, Norway and elsewhere had already conducted informal discussions with regard to the possibility of such extension. There has come to members of the Committee from various sources a definite statement of the need in other countries of some agency for bringing research students and faculty investigators into closer personal contact in order to stimulate and guide the development of research that it may attain adequate breadth and strength and develop as a whole rather than in a multitude of narrow details and along unrelated lines.

It was pointed out that the constitution of the Society places no limitations on the establishment of a chapter that are geographical or racial in character. The Society now has the power to accept an application for founding a chapter in any place where the real aim of the Society is cherished and promoted.

As an expression of sentiment the following action was taken:

"The Executive Committee recommends the passage of the following resolution by the Convention: Resolved that the establishment of Sigma Xi chapters in research centers in foreign institutions, being within the provisions of the Constitution of the Society, is a desirable development in the efforts of Sigma Xi to encourage the spirit of fellowship in research."

The question of confusion existing in the records of the Society and in the actions of various chapters because of the use of different terms for the same kind of membership and similar names for different types of membership was taken up for discussion. President Stieglitz consented to take up the question and prepare the material for printing in the *QUARTERLY* and submission to the next convention with a view to making such changes as will render the terminology explicit and the intent of the Society clear.

The Secretary called attention to the fact that at least one chapter lists separately as *affiliated members* those persons who have

come to the institution from other chapters in the Society. After the reading of the constitution emphasis was laid upon the fact that a member elected to the organization in any chapter becomes *eo ipso* a member of the other chapter in an institution to which he may subsequently become attached.

It was announced that the Union Chapter proposed to offer an amendment to the constitution providing that the Treasurer should be officially made a member of the Executive Committee and changing the total membership of the Committee from seven to eight. It was voted that when the official notification of such action come to the Secretary it should be printed in the *QUARTERLY* and brought before the next convention with a recommendation for its adoption.

Since the meeting of the Executive Committee the Secretary has received the following letter:

"At a meeting of the Union Chapter of Sigma Xi held May 1, 1919, the following amendment to the National Constitution of the Society was proposed by Doctor Ellery.

"By an unanimous vote it was recommended to the other chapters of Sigma Xi for favorable action, and I was instructed to send a copy of the amendment to you with the request that it be transmitted to the chapters of the Society in time to permit action at the next coming national convention.

Fraternally yours,

M. F. SAYRE.

"Proposed Amendment to the Constitution of Sigma Xi, recommended by the Union Chapter at its meeting May 1, 1919.

"Article 7, Section 1, of the Constitution shall be amended to read as follows:

"The officers of the Society shall be a president, a secretary, a treasurer, and an executive committee of 8 of which the president, secretary, and treasurer shall be *ex officio* members."

The printing of the amendment herewith constitutes official notification to the chapters and the proposal will come up for action at the next convention.

The committee on associate membership emblems reported to the Executive Committee regarding the contract which was authorized by the Convention and after discussion it was voted that the price of the emblem should be placed at \$2.25 to which sum should be added any tax that might be assessed upon jewelry; this extra charge to be

eliminated or modified in accordance with changes in the law at any given time. As the war tax on jewelry is now 10c the price of the associate membership emblem will be \$2.35. Communications were reported from chapters which indicated individual satisfaction with the form and character of the emblem and the reasonable price at which it is furnished to chapters under the contract which has been placed.

The Committee discussed the question of the active membership badge which was referred to a subcommittee for consideration and report as recorded in the minutes of the Pittsburgh Convention (QUARTERLY, 6:11-12). It was the opinion of the Executive Committee that special effort should be taken to secure a report of this for consideration at the coming convention and the Committee was requested to take under consideration the possibility of copyrighting the badge so that it might be brought under legal control.

A letter was read from the University of Washington Chapter in which it appeared that that chapter was not aware of the existence of any insignia for associate members and thus has been of the opinion that this type of membership was not desirable. The Secretary was instructed to call attention of all chapters again to this type of membership and to the existence of a recognized emblem which has been adopted by the general convention and should be given to all associate members and worn by them. The Secretary was also asked to emphasize the fact that this is the only emblem which can be worn by associate members.

The University of Washington Chapter further inquired when an associate member might become an active member and in what manner. In the course of the discussion it appeared that some individuals have acquired a mistaken idea to the effect that the election of any individual as an associate member prevents that person becoming an active member of the Society. The Executive Committee expressed the desire that the widest credence be given to the correct views in order that these misunderstandings may be done away with. An associate member becomes active when the person in question has fulfilled the conditions for active membership, has been recommended by the electoral board of the chapter and elected an active member in accordance with the constitution of the Society and the by-laws of the chapter concerned. It is of course not necessary that a person should be elected as an associate member to be

brought under consideration for active membership, but the Society regards associate membership as a preliminary step toward active membership and by its action in electing the individual to associate membership the chapter indicates that the person designated has already shown promise of research ability and should be further stimulated to the realization of that promise.

The Northwestern chapter has raised the following questions with regard to the status of associate members and the regulations to which they should be subject:

1. Do they pay the regular initiation fee of three dollars?
2. Do they pay the local annual dues of one dollar?
3. Should they sign the constitution in a separate list in the secretary's book or along with the active members?

With reference to all three questions the Executive Committee voted after extended discussion that these were natural subjects for the regulation of individual chapters and should be handled by chapters in the light of local conditions and in accordance with the interests of the particular chapter. Attention was called to the fact that Article 9 of the constitution in regard to chapter assessments reads as follows: "Expenses of the Society which shall be voted by conventions shall be met by an assessment on the several chapters, pro rata, on the basis of their resident membership." Since it is evident that associate members are resident it follows that their names must be reported to the National Treasurer among those for which the chapter is called upon to pay an assessment. The Executive Committee accordingly recommends very strongly that the chapters should not neglect to include the associate members in the mailing list of the chapter since they are evidently in need of the maximum possible information with regard to the extent and character as well as the ideas and influence of the organization and will be sure to profit by a perusal of the historical data which are contained in the *QUARTERLY*. It was further suggested that the practice of admitting members of any sort without laying upon them certain financial obligations was contrary to the best interests of the Society as well as likely to impress them with the incidental if not the trivial character of the organization and to lead them to under-rate their relations to it. The Secretary announced that special associate membership record cards printed in blue had been prepared and are available for chapters under the general conditions

established by the Society for the distribution of such cards, namely that a duplicate set be returned to the Secretary's office for the national index which is kept there.

The President reported that a canvass of the Society has shown a very large number of the chapters unequivocally opposed to the holding of a convention before December, 1919, and confident that the Executive Committee could transact all necessary Society business. In accordance with the opinions thus expressed by the chapters it was decided that the next convention should be held at the close of this year and that no effort should be made to replace the convention of 1918 which has been postponed by virtue of circumstances and the advice of the Organizing Committee for the meeting of the American Association for the Advancement of Science. In accordance with the provision of the constitution empowering the Executive Committee to take charge of business matters during the interim between conventions, the Committee voted to levy the usual assessment upon chapters. The Treasurer was requested to send the formal request for the remittance of the sum due and the President was asked to supplement this action by a letter to the presidents of the individual chapters.

The question of the time and place for the mid-winter convention was discussed and the Executive Committee was of the opinion that the Society should meet in connection with the American Association for the Advancement of Science as provided for under ordinary circumstances by the recommendation of the constitution in Appendix V. Since the Association meets in St. Louis in convocation week at the holiday season the officers were requested to take steps at an appropriate date to provide for the local arrangements.

It was suggested that special attention be given to making an early announcement of the time and place of the Sigma Xi dinner with a view to circulating it as widely as possible in order that members attending the meeting of the Association may plan to be present on the occasion and may avoid other engagements for the same date.

The Secretary presented a report with reference to the record of chapter elections thus far printed in the *QUARTERLY*.

It was stated that certain chapters have perfected arrangements for printing on the commencement program or in the catalogue of the institution a list of those persons elected to Sigma Xi; the basis

for such action being that the election was of the character of a peculiar honor bestowed upon the individual student and properly recognized by the university authorities in the manner indicated. The printed forms used by the Cornell chapter seemed to be particularly satisfactory for Sigma Xi purposes and Professor Richtmyer was requested to send samples of the same to other chapters with a statement that the Executive Committee recommended them to the careful consideration of the chapters.

The Secretary was requested to furnish the Treasurer with the record of the number of names on the mailing list of the *QUARTERLY* as furnished by individual chapters. He was further requested to call attention again to the rule adopted with reference to subscriptions to the *QUARTERLY* and lists to be furnished by secretaries.

The question of clerical assistance for conducting the business of the Society was brought up by the President and discussed at length. It was the opinion of the members present that action should be taken looking toward securing a larger portion of the time of some competent person to handle the routine matters of Society business which are naturally and inevitably increasing with the growth of the Society and the extension of its activities.

The question of Sigma Xi fellowships was reviewed and the plan for pushing this project was discussed in detail. With a view to bringing the matter more thoroughly before the attention of chapters and to arousing their interest more effectively it was voted to request that each chapter suggest the names of three alumni members as appropriate and energetic representatives from which the President could select with due reference to geographic location, relation to interests of different kinds and total membership of the Committee such names as might seem most appropriate for the end in view. It was, also, the opinion of the Committee that a smaller group should be selected as the Executive Board to have direct charge of the management of the undertaking.

Emphasis was laid upon the necessity of making it clear to all concerned that this movement aimed to reach those members of the Society at present inactive and did not embrace those now engaged in advancing the interests of the active chapters. It was decided that the inactive members should be approached with a view to making contribution of at least \$5.00 or more if the individual was favorably disposed. This contribution to be payable in lump sum

or as \$1.00 annually for five years. The President was instructed to draw up a detailed plan of organization and to take steps to perfect this organization and set the machinery in motion for accomplishing its purposes.

HENRY B. WARD, *Secretary*

BEGINNINGS AT UNION

There is one matter concerning the origin of the chapter at Union which is of peculiar interest, and may account in part for the growth of the Union chapter. Several months before the existence of Sigma Xi was known at Union, a group of men at the head of the Scientific Section of the Senior class, with the encouragement of some of their professors, had conceived the idea of organizing an honorary society for graduates in our scientific courses corresponding to Phi Beta Kappa for the classical men. We met many times and drew up a constitution and by-laws modeled somewhat after those of the above-mentioned society. It was proposed to call the new organization "The Henry Society," because of the association of the eminent scientist, Joseph Henry of Albany with Union College. Though there was some talk of adopting a name without local association, in order that the society might establish chapters in other institutions, yet no other name was proposed. We were struggling with the matter of the name, when one of the professors interested reported to us that a society of purpose similar to our own had just been established at Cornell, and that we were invited to form a chapter at Union. Inasmuch as this promised to be an inter-collegiate society, it seemed wise to most of us, to give up our project of a local society and join Sigma Xi.

E. W. MILLER, *Union 1887*

REPORT OF THE TREASURER OF SIGMA XI FOR THE YEAR 1918

On February 8, 1918, in accordance with the instruction of the preceding annual convention, the Treasurer issued a call to all the chapters for the annual dues of fifty-cents per active member. The dues of all the chapters except two, the University of California and District of Columbia, have been paid.

RECEIPTS			
1918	Chapter	Assessment	Amount
Jan. 1	Balance		\$343.24
Jan. 14	University of Wisconsin	1918	90.00
Feb. 10	Brown	1918	17.00
Feb. 11	Purdue	1918	28.50
Feb. 11	Washington University	1918	24.00
Feb. 11	Worcester	1918	15.00
Feb. 11	Union	1918	9.50
Feb. 25	Indiana	1918	23.50
Mar. 1	Missouri	1918	32.50
Mar. 8	Illinois	1918	91.00
Mar. 19	Syracuse	1918	27.00
Mar. 19	Columbia	1918	47.50
Apr. 4	Michigan	1918	37.50
Apr. 9	Kansas	1918	15.00
Apr. 15	Case School	1918	9.00
Apr. 16	Nebraska	1918	31.00
May 18	Colorado	1918	22.00
May 9	Iowa State	1918	28.50
May 19	Cornell	1918	72.00
May 28	Northwestern	1918	21.50
June 10	University of Washington	1918	25.10
July 11	Texas	1918	19.00
July 15	Chicago	1918	69.50
July 16	Rensselaer	1918	30.15
Aug. 3	Minnesota	1918	77.00
Aug. 12	Yale	1918	30.00
Sept. 24	Ohio	1918	37.00
Dec. 3	Pennsylvania	1918	54.00
Dec. 14	Stanford	1918	21.50
	Exchange on checks	1918	.15
Total receipts			\$1,348.64

TREASURER'S REPORT

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DISBURSEMENTS

QUARTERLY, December, 1917	\$ 92.20
QUARTERLY, March, 1918	108.29
QUARTERLY, June, 1918	105.65
Index to Vol. V. of QUARTERLY	7.95
Secretary's Assistant	385.00
Travel Expenses, Executive Committee	261.32
Expenses of President's Office	42.25
Expenses of Treasurer's Office	4.00
Letterheads	2.75
Membership certificates	20.50
Library Bureau cards	18.36
Exchange on checks10

Total disbursements\$1,048.37

Cash on hand, Dec. 31, 1918 300.27

\$1,348.64

GEO. B. PEGRAM,

Treasurer, Sigma Xi Society.

GEO. B. PEGRAM.

December 31, 1918.

March 27, 1919

We have audited the accounts of the treasurer of the Society of Sigma Xi for the year ending December 31, 1918 and certify that the income shown by the books of the treasurer have been duly accounted for, that payments have been properly vouched and that the balance sheet and accounts submitted contain a true statement of the financial condition of the Society.

(Signed) H. E. HAWKES

ALEXANDER SMITH

CHAPTER REPORTS
1917-18
NORTHWESTERN CHAPTER

During the academic year 1917-18 seven meetings were held for the presentation of scientific papers as indicated in the list below.

November 8, 1917. Program by the Department of Chemistry. Accuracy in the Determination of Atomic Weights, by Prof. M. A. Hines; How the War is Affecting Chemistry, by Dr. W. L. Lewis; Chemistry in Columbia University, by Dr. W. V. Evans.

December 13, 1917. Program by the department of Zoology. The Question of Commissural Neurones in the Autonomic Ganglia, by Dr. S. E. Johnson; Structure of the Sympathetic Trunks and the Splanchnic Nerves, by Dr. S. W. Ranson; Mechanism of Efficient Vision, by Dr. L. B. Arey; Interrelation of Soma and Germ Plasma in Insects, by Dr. S. I. Kornhauser.

February 14, 1918. What American Science is doing for Aviation, by Prof. John F. Hayford.

March 14, 1918. The Sidereal System, by Prof. Wm. D. MacMillan.

April 25, 1918. Prophylaxis, by Prof. J. P. Simonds.

May 24, 1918. Earliest Reptiles and Amphibian of America, by Prof. S. W. Williston.

Four of these meetings were preceded by business sessions. Before the scientific program of January 17 about twenty members met for an inexpensive dinner and business meeting, the special order being Methods and Suggestions for the Stimulation and Increase of Original Scientific Production at Northwestern University. The discussion was opened by President Kornhauser and a most profitable meeting resulted.

The following new members were elected during the year:

FROM THE FACULTY

ARTHUR WILLIS BARTON, A.B.

Chemistry

A comparison of methods for the determination of the proteolytic activity of pancreas preparations (with J. H. Long), Jour. Am. Chem. Soc., 36:2151-66, Oct. 1914.

ARTHUR DAVENPORT BLACK, M.A., M.D., D.D.S.

Dentistry

125 papers in technical dental journals.

ADELAIDE ALBERTINE SPOHN, M.S.

Chemistry

On the chemical composition of white and yellow egg yolk of the fowl and pigeon (with Oscar Riddle). *Am. Jour. Physiol.*, 41:397-408, Sept. 1916. When a gland functions for the first time is its secretion the equivalent of subsequent secretion? (with Oscar Riddle) *Am. Jour. Physiol.*, 41:419-429, 1916.

EDWARD CHACE TOLMAN, Ph.D.

Psychology

Retroactive inhibitions as affected by conditions of learning. *Psychological Monographs*, 25:30, 1917.

WILLIAM ZINKEISEN, Ph.D.

Chemistry

Oxalendiamidoxim und Oxalenanilidoximamidoxim. *Deutsch. Chem. Gesellschaft*, 22: 2946-57, 1889.

GRADUATE STUDENTS

HUGH GEHLE BERSIE, B.S.

Engineering

Was called for National Meteorological Service in the Signal Corps

THEODORE DOLL, B.S.

Mathematics

Thesis: The errors in Gauss' Method of Quadrature

FRANCIS MCMURTRIE HOWELL, B.S.

Engineering

Thesis: Compression Tests in Column Materials

THOMAS STAGER MOULDING, B.S.

Engineering

Was called for National Meteorological Service in the Signal Corps

UNDERGRADUATES

HUGH PATERSON

Chemistry

Because of very high grade work

EDGAR WERTHIM

Chemistry

Because of very high grade work

LEWIS H. WELD, *Secretary.*

1918-19

During the academic year 1918-19 six meetings were held for the reading of scientific papers as indicated in the list below:

January 30, 1919. The Suppression of Endemic Diseases, by Dr. Arthur I. Kendall.

February 20, 1919. Forest and Chaparral of California, by Dr. William S. Cooper.

March 13, 1919. Development of Explosives, by Dr. Ward V. Evans.

April 10, 1919. Modern Gravity Methods and Research, by Prof. William H. Burger.

May 8, 1919. The Structure of the Atom and the Evolution of the Elements, by Prof. W. D. Harkins.

June 6, 1919. Electro-Catalytic Reactions, by Prof. William C. Bauer.

Business was transacted at three of these meetings, either before or after the scientific paper of the evening. The following were elected to active membership during the year:

FROM THE FACULTY

LEONARD PERCY DOVE

Geology

Pyrite in the Coals of Indiana. Rept. Dept. Geol. and Nat. Res. Indiana for 1918.

JESSICA MAY YOUNG

Astronomy

Five papers on the Elements and Ephemeris of three different Comets. Lick. Obs. Bulls, 268, 280, 296, and Harvard Obs. Bull. 637.

GRADUATE STUDENTS

FRANK HAROLD REULING

Pathology

Acquired Immunity to an Animal Parasite. Jour. of Infect. Diseases, Apr. 1919.

MARY CONSTANCE BLAIR

Botany

Studies in the Morphology and Embryology of *Reboulia hemispherica* (L.) Raddi. Thesis for MS.

The following were elected to associate membership:

FROM THE FACULTY

ARTHUR B. CARR

Physics

GRADUATE STUDENTS

NIEL FREEBORN BEARDSLEY

Physics

FRANK D. DANIELSON

Engineering

FRANKLIN MOHR

Engineering

LILLIAN MARGUERITE SIMMONS

Botany

LEWIS H. WELD, *Secretary.*

THE CORNELL CHAPTER

1917-18

During the year 1917-18, seven meetings were held, one of which was devoted entirely to Chapter business. Owing to the disorganized conditions, it has been impossible to carry out any elaborate scheme of meetings, so that the work of the year has not been up to the high standard set in previous seasons. The program covered

subjects bearing on the prosecution of the war, and other topics of special current interest, and the speakers were, with one exception, from the local community. The lectures were as follows:

October 23, The Art of Flying, by Mr. Raymond Ware, of the Morse-Thomas Aircraft Corporation.

December 13, Experiences on the Firing Line, by Captain G. M. James, of the British Army.

January 15, The Scientific Basis of Camouflage, by Mr. Louis Agassiz Fuertes.

February 19, Surgery Back of the Firing Line, by Dr. W. F. Lee.

March 26, The Re-education of the Crippled Soldier, by Professor George A. Works.

April 20, Coal Mining with a Camera, by Professor Charles H. Richardson, of Syracuse University.

In the Fall, twelve Associate members were elected from the Senior class and from the Graduate school, as follows:

GRADUATE STUDENTS

RALPH EMERSON BITNER, B.S.	<i>Physics</i>
JOHN CHRISTOPHER SCHELLENG, A.B.	<i>Physics</i>
ERNEST EDWARD SMITH, A.B.	<i>Physics</i>
HVLA STOWELL WATTERS, A.B.	<i>Histology and Embryology</i>

MEMBERS OF THE CLASS OF 1918

DAVID HOUSER BANKS, B.S.	
	<i>Mechanical and Electrical Engineering</i>
JOSEPH ADAM BECKER	<i>Physics-Mathematics</i>
LEO BEHR	<i>Mechanical Engineering-Physics</i>
HENRY ARTHUR GAERTNER	<i>Electrical Engineering-Physics</i>
JAMES MEADE HYATT	<i>Physics-Mathematics</i>
PIERRE MERTZ	<i>Physics-Mathematics</i>
HERMENEGILDO BALBINO REYES	
	<i>Mechanical and Electrical Engineering</i>
WILLIAM PERRINE VAN WAGENEN	
	<i>Histology and Embryology-Physiology</i>

At the last meeting of the year, thirty-four candidates were initiated into active membership. Three of these were elected to Associate membership last Fall. The list of new Active members follows.

MEMBERS OF THE FACULTY OF CORNELL UNIVERSITY

WILLIAM ARTHUR HAGAN, D.V.M. (Kansas State Agricultural College, 1915), M.S. (Cornell, 1917) *Instructor in Pathology*

Veterinary

Etiology and mode of infection of white scours in calves. Study of the distribution of Sclerostomes, etc.

NON RESIDENTS

EDWARD PHILIP THEODORE TYNDALL, B.A. (Richmond College, 1912) *Assistant Physicist, U. S. Bureau of Standards*

Physics

Note on the absorption of tetrachlorphenolphthalein. The absorption of acetone. The visible and ultra-violet absorption of the orcinolphthaleins.

GRADUATE STUDENTS

EUGENE CURTIS AUCHTER, B.S.A. (Cornell, 1911) *Assistant in Pomology, Associate Professor of Horticulture, West Virginia University.*

Pomology

Five years' investigation in apple thinning. The apple as affected by varying degrees of dormant and seasonal pruning. Investigations of pruning, of self-sterility of apples, of the response of fruit-trees to fertilizers.

AARON BODANSKY, B.S. (Cornell, 1915) *Instructor in Biochemistry*

Physiology and Biochemistry

The chymase of *Solanum elaeagnifolium*. Chemistry of bacterial metabolism. The enzymes of *Solanum elaeagnifolium*.

HAROLD SIMMONS BOOTH, A.B. (Western Reserve, 1915), A.M. (same, 1916) *Fellow in Chemistry.*

Chemistry

The density of silicon tetrafluoride. The density of the air in Cleveland. The silver-nitrogen ratio.

HSIEH-CHIU CHIU, B.S., in C.E. (Gov't. Inst. of Tech., Shanghai)

Civil Engineering

A critical comparison of the methods of determining the stresses in swing bridges.

CORA LOUISA FRIEDLINE, A.B. (University of Nebraska, 1913), A.M. (Same, 1915)

Psychology

A study of cutaneous perception.

JOSEPHINE MIXER GLEASON, A.B. (Vassar, 1914) *Instructor in Psychology.*

Psychology

An experimental study of the psychology of relations.

- ANGEL KAINGAL GOMEZ, D.V.M. (University of the Philippine Islands, 1914) *Veterinary*
An outbreak of an undescribed infectious disease of guinea pigs.
- STUART DEMING JACKSON, A.B. (Cornell, 1916) *Instructor in Chemistry*
Ortho-cresol-sulphon-phthalein and some of its derivatives.
- JOSEPH PETER KOLLER, B.Chem. (Cornell, 1918) *Chemistry*
The preparation of selenic acid and some of its compounds (thesis)
- JOHN IRVIN LAURITZEN, B.S. (Utah Agr. College, 1914) *O. F. Curtis, et al.*
Relation of temperature and humidity to infection by certain pathogenic fungi (thesis)
- ASA EMANUAL MCKINNEY, A.B. (University of Indiana, 1914), A.M. (same, 1915) *Chemistry*
Electrodeposition of smooth solid lead from lead nitrates solutions. Many small investigations at the Agr. Expt. Station. Study of defective small-arms ammunition.
- NEMESIO BLANCO MENDIOLA, B.S. (University of the Philippine Islands, 1914), M.S. (same, 1916) *Plant Breeding*
A study of Philippine bast fibers. Some phycomycetous diseases of the Philippines. Variation and selection within colonial lines of *Lemna minor* L. (thesis)
- FRANKLIN WILLIAM PETTEY, B.A. (University of Maine) *Entomology*
The codling moth and its control in the Western Province. The quince borer of South Africa. A biological study of the codling moth as it occurs in South Africa. A revision of the genus *Sciara* of the family Mycetophilidae.
- WILLIAM MALCOMB STOBBS, A.B. (Cornell, 1915) *Instructor in the Medical College* *Medical*
The development of the pharyngeal musculature in man. The development of the blood supply of the Hypophysis cerebri in man.
- VIDAL ARECO TAN, B.A. (University of the Philippine Islands, 1913) *J. H. Tanner, et al.*
Homological transformations (thesis)
- JOHN GRAHAM THOMPSON, B.Chem. (Cornell, 1915) *Chemistry*
Overvoltage. Zirconia as a Refractory.
- FRANK BURKETT WANN, A.B. (Wabash, 1914) *Instructor in Botany (College of Agr.)* *Botany (Agr.)*
Possible nitrogen fixation in certain species of fresh-water algae. Enzyme studies in green algae.

- RALPH WALTER GRAYSTON WYCKOFF, B.S. (Hobart, 1916) *Instructor in Chemistry.* Chemistry
 The detection of the rare elements by means of their arc spectra. The chemistry of caesium.
- BENJAMIN PERCY YOUNG, B.S. (Kansas, 1908) M.S., (Same, 1916) *Instructor in Entomology.* Entomology
 Ecology of *Paleacrita vernata*.
- PAUL THOMAS YOUNG, A.B. (Occidental College, 1914), A.M. (Princeton, 1915) *Sage Scholar in Psychology* Psychology
 An experimental study of mixed feelings.

MEMBERS OF THE CLASS OF 1918

- JOSEPH ADAM BECKER (*Associate member of the Chapter*) *Assistant in Physics* Physics
 The change of resistance of thin films of bismuth in a magnetic field.
- WILLIAM ARTHUR BILLINGS, D.V.M. (Cornell, Feb., 1918) *Assistant in Diagnosis for two years.* Veterinary
 Phenol death point of *Bacterium tuberculosis*.
- BENJAMIN JONATHAN FINKELSTEIN Veterinary
 Coagulation time of the blood of the domestic animals. Orokinase and Amylases in the mouth secretions of the domestic animals.
- HARRISON PORTER HOOD Chemistry
 Adsorption by charcoal and an attempt to make a synthetic charcoal.
- JAMES MEAD HYATT (*Associate member of the Chapter*) *Assistant in Physics* Physics
 Candle-power variations in incandescent lamps for alternating currents of various frequencies. The ultra-violet absorption of anthracene, benzene, and other organic compounds.
- HAROLD DRAPER KINNEY, *Assistant in Chemistry* Chemistry
 The chlorination and bromination products of fluoran.
- PIERRE MERTZ (*Associate member of the Chapter*) *Assistant in Physics* Physics
 Effect of superimposed harmonics on hysteresis
- HAROLD MEADE MOTT-SMITH Mathematics
- MELVIN NICHOLS, *Assistant in Chemistry* Chemistry
 Dinitroso-resorcinol and some of its derivatives.
- EMILY SWEETLAND REED Entomology
 The May-fly ovipositor.
- DAVID SCHULTZ, *Assistant in Chemistry* Chemistry
 Investigation of certain gases for the Bureau of Mines.

ALUMNI

WILBER ALBERT CARTER, M.E. (Cornell, 1913) *Research Engineer*
The Detroit Edison Co., Detroit, Mich. *Sibley College*

Electrically heated japanning ovens. Electric heating elements. Performance of steel tube economizers. Many other titles.

CORNELL CHAPTER, 1918-19

During the year 1918-19 there were fewer meetings held than has been usual in the past. The attention of the University members was largely directed to investigations along war lines, many of the members being engaged on governmental problems. This spring has seen a gradual growth in the Chapter's activities and it is hoped that by next year the usual interesting program activities will be seen. The following meetings were held during the past season:

November 4, 1918, Lecture by Prof. W. F. Wilcox on Schlieffen versus Foch, An Amateur Study in Strategy. (Public lecture)

December 19, 1919. Public Lecture by Prof. Ernest Blaker on Some Principles of Flight. Prof. Blaker was at that time with the Ground School for Aviators maintained by the government at Cornell University.

March 11, 1919. Public Lecture by Dr. Arthur L. Day on The Volcano Kilauea in Action. Dr. Day told of his observations made while inside the crater of the volcano when in action. This was one of the best lectures this Chapter had had the pleasure of hearing.

May 10, 1919. Business meeting. Special order of business election of active members of whom 25 were elected as listed below. Following the business meeting there was a demonstration by the department of Entomology in which some lines of investigation of that department were exhibited.

May 17, 1919. Business meeting. Special order of business initiation of newly elected members. Following the initiation exercises light refreshments were served followed by an interesting program of talks and music.

June 2, 1919. Public Lecture by Dean V. A. Moore on The Role of Bacteriology in the War. This lecture was followed by a business meeting called for the special business of election of officers for the coming year. The officers elected will be found elsewhere in this issue of the *QUARTERLY*. At this meeting it was voted that

the offices of recording and corresponding secretary be filled by one member for the coming year when amendments to the by-laws of the Chapter can be made to make this plan permanent. The selection of two members to represent this Chapter on the Committee to provide Sigma Xi Fellowships was referred to the Executive Committee of the Chapter, with power. In conformity with this action the Executive Committee appointed F. K. Richtmyer and an alumni member to be selected by Prof. Richtmyer.

MEMBERS ELECTED MAY 10, 1919

MEMBERS OF THE FACULTY OF CORNELL UNIVERSITY

EDWARD SEWALL GUTHRIE, B.S. (Iowa Agri. College, 1905), M.S.A. (Cornell, 1910), Ph.D. (Cornell, 1913) *Professor of Dairy Industry.*

Dairy Industry
Metallic Flavor in Dairy Products. Variations in the Tests for Fat in Cream and Skimmed Milk (with G. C. Supplee). Two Factors Causing Variation in the Weight of Print Butter (with H. M. Pickerill). Distribution of Moisture and Salt in Butter (with H. E. Ross). Concerning Rancidity of Butter. Butter Shrinkage.

GUSTAVE FREDERICK HEUSER, B.S. (Cornell 1916) Ph.D. (same, 1918) *Assistant Professor of Poultry Husbandry*

Poultry Husbandry
A study of the Mating Behavior of the Domestic Fowl (Thesis for Master's Degree). Growth and Development of the Domestic Fowl with special Reference to the Male (Thesis for Doctor's degree). Summary of the First Year Agriculture in New York State High Schools. Influence of Heredity on Educability.

GRADUATE STUDENTS (15)

PAUL LEVERNE BAYLEY, A.B. (Univ. of Arkansas, 1913) A.M. (Univer. of Illinois, 1914) *Instructor in Physics* *Physics*
Capacity between a wire and a square conduit by the method of electrical images.

LESLIE ELSWORTH CARD, B.S. (Cornell, 1914) *Instructor in Poultry Husbandry.* *Poultry Husbandry*

3rd, 4th, 5th, Annual International Egg Laying Contest (Co-author). A Study of Egg Production in White Leghorns. Connecticut Experimental Station Bulletin, Poultry House Construction (Co-author). Connecticut Experimental Station Bulletin, Milk Feeding and its Influence on Growth (Co-author). Rearing and Mortality of Chickens (Senior author).

- JACOB ROLAND COLLINS, B.S. (Ohio Univ. 1912), M.S. (Purdue Univ. 1914) *Instructor in Physics* *Physics*
 High Temperature Measurements (with Prof. Ferry). Analysis of Synchronous Motor Curves.
- HARRY W. DYE, B.S.A. (Wisconsin Univ.), M.S. (Cornell) *Fellow in Plant Pathology* *Plant Pathology*
 The Comparative Resistance of Strains of Celery to Late Blight (*Septoria Petroselini*). Three investigations on different diseases of Lettuce.
- WILLIAM HENRY EYSTER, A.B. (Bucknell 1914), A.M. (Cornell 1915) *Assistant in Plant Breeding* *Plant Breeding*
 Linkage Relations of the Tuncate Character in Maize. Genetic Studies of Certain Culm Abnormalities in Maize.
- JOHN EDWARD FOGLESONG, A.B. (Wabash, 1910), M.A. (Ohio State Univ., 1912) Ph.D. (Cornell 1919) *Instructor in Chemistry* *Chemistry*
 Action of Phosphorous Acid on Mercuric Chloride and the Law of Mass Action (Co-author). Cooling Curves in the System Ammonium Nitrate Ammonium Chlorate and Water (For Ordnance Dept., U. S. A.).
- EDWIN F. HOPKINS, B.S. (Cornell, 1915) *Instructor in Plant Pathology* *Plant Pathology*
 The Botrytes Disease and Other Diseases of Tulips (Thesis for Doctor's Degree). The Botrytes Blight of Buckwheat. Physiological Studies on Botrytes. Two Subjects of Investigation while in the Chemical Warfare Service, U. S. A.
- LOUISE KELLEY, A.M. (Mt. Holyoke College, 1917) *Fellow in Chemistry* *Chemistry*
 Synthesis of the Polypeptide-hydantoin: Tyrosylalanine-hydantoin. Parahydroxy-Benzoyl-Benzoic Acid and Some of its Derivatives.
- DIH YUIN LEE, B.S. (St. John's Univ. 1915) *Physics*
 Temperature-resistance Effects in Thin Metal Films (Master's thesis).
- HELEN ELIZABETH MURPHY, B.S. (Cornell, 1917) *Assistant in Biology* *Entomology*
 The Egg-Laying Habits of the Caddisfly, *Brachycentrus*. The Mouth-parts of the Ephemera.
- SOJI NISHIKAWA, Ph.D. (Imperial Univ. of Tokio) *Honorary Fellow in Physics* *Physics*
 Structure of Some Crystals of Spinel Group. Numerous other Titles. General Investigations of X-Ray Phenomena.
- SEIICHIRO NODA (Equivalent to E.E., Kiota) *Honorary Fellow in Physics* *Physics*
 On the Induction Motor under Cyclical Operation. The Matrix Method of Treating Alternating Current Phenomena.

KATHRYN LILLIS SLINGERLAND, A.B. (Smith College, 1918) *Fellow in Zoology.* *Zoology*

Comparative Study of Jacobson's Organ in Caudate Amphibia (Master's thesis).

EDWINA MARIA SMILEY, B.A. (Wellesley College) *Instructor in Plant Pathology.* *Plant Pathology*

The Phyllosticta Blight of Snapdragons (Master's Thesis). The Rust Disease of Snapdragons (Puccinia Antirrhini).

JAY R. TRAVER, A.B., (Cornell 1918) *Assistant in Entomology.*

Entomology

Ecological Relations of the Members of the Oecophorid genus Depressaria. Ecology of the Mayfly, Blasturus cupidus.

MEMBERS OF THE CLASS OF 1919

ARTHUR WALKER BULL, *Assistant in Chemistry.* *Chemistry*

Investigation of the Possible Action of Iodine, Iodides, or Iodates upon Ammonium Nitrate and upon Amatol Containing 20% of TNT. (For Ordnance Dept., U. S. A.).

LEE HINCHMAN CLARK, *Assistant in Physical Chemistry*

Chemistry

Investigations of the Chemistry of Colloids, more Particularly on the Properties of Emulsions.

EUGENE JOSEPH HASSELBECK, *Assistant in Chemistry* *Chemistry*

Ortho-and Para-hydroxydiphenyl and some of Their Derivatives.

FREDERICK NILL, *Assistant in Chemistry*

Chemistry

Para-ethoxy-and Para-methoxy-benzoyl-benzoic Acid and Some of Their Derivatives.

ANNA LAURA WHITE, *Assistant in Physics.*

Physics

Effect of Absorbed Gas on the Resistance of Thin Films (Senior thesis).

ANDREWS CLEMENT WINTRINGHAM, *Assistant in Chemistry*

Chemistry

A New Method of Analysis of the Nitro-compounds of the Aromatic Series.

THOMAS STEVENS CLARK, C.E. (Cornell 1894) *Chief Engineer, Alphons Custodis Chimney Construction Co.* H. S. Jacoby et al.

Modulus of Elasticity for Various Mixtures of Stone and Cinder Concrete. The World's Largest Chimney: 50x506 ft. Straightening a Tall Leaning Factory Chimney by a New Method. Analysis and Details of Tall Chimneys.

FRANCIS HARPER, A.B. (Cornell 1914) *With U. S. Biological Survey.* *Zoology*

The Birds of Okefinakee Swamp, Ga. (Joint paper). Several other Papers on Birds, Direct Color Photography, and Exploration. Report to Victoria National Museum (Ottawa, Can.). Report on Investigations in Florida (U. S. Biological Survey). Study of the Rat Problem in the Trenches.

F. G. SWITZER, *Secretary.*

NEBRASKA CHAPTER

The following members were elected to the Nebraska Chapter on May 9:

ALUMNUS

ORRINGTON T. SWAN, A.B. 1903; B.Sc. 1904 *Botany*
Density Rules and Their Applications to Timbers. *Lumber World Review*
July 10, 1915.

FACULTY

LEUNIS VAN ES, M.D.; V.S. *Animal Pathology*
Sur la nature anaphylactique de l'intoxication parasitaire, par L. Van Es et A. F. Schalk. *Annales de l'Institut Pasteur. Avian Tuberculosis. Bulletin* 108 N. D. Agr. Epr. Sta. *Über die intrak. Anw. von Vogeltub. Z. festst, der Hühnertub. Zeitscher. f. Infekt. Krh., parasit. Krk. u. Hyg. d. Haustiere. Bnd. XIV p. 271, 1913.*

GRADUATES

ROSCOE C. ABBOTT, B.Sc. 1910; A.M. 1918 *Chemistry*
A New Method for the Determination of Sodium and Potassium.—thesis for A.M.

THEOS. J. THOMPSON, A.B. 1903; A.M. 1915 *Chemistry*
Preparation of Yttrium Chloride Acetonate—thesis for A.M.

LOUIS O. WOLFAUGER *Geography*
Soil Survey Chase County. *Economic Geography of the Sand Hills of Nebraska.*

SENIORS

PAUL LINDLEY *Applied Mechanics*

JAMES S. MARTIN *Physics and Elec. Eng.*

ROBERT ALEXANDER NESBIT *Botany*

A Method of Making Toto Mounts of Unicellular Mounts. *Trans. Am. Mic. Soc. XXX, 139.*

CARL FREDERICK RUSCHE *Zoology*

A New Plagiorchis Trematode Parasitic in the American Muskrat with a Key of the Species of Plagiorchis.—senior-thesis.

ILLINOIS CHAPTER, 1918-19

During the year the Illinois Chapter has held nine meetings at eight of which a scientific program was presented. A social hour was held immediately following each of these programs.

The list of meetings with speakers and topics is as follows:

November 20, The Illinois Eclipse Expedition to Rock Springs, Wyoming, by Professor Joel Stebbins.

December 18, Chicago as a Gateway for the Return of Life at the Close of the Glacial Period, by Frank C. Baker.

January 15, Fatigue in Metals, by Professor Herbert F. Moore.

February 19, An Experimental Demonstration of a New Source of Sound, by Professor C. T. Knipp.

March 19, Fixation and Nitrification in Relation to the Nitrogen Problem, by Professor A. L. Whiting.

April 16, River and Forest in Illinois, by Professor Stephen A. Forbes.

May 21, Address to the Initiates by Professor Charles Zeleny, President.

May 28, Joint meeting with Phi Beta Kappa, at which Dr. Thomas Hunt Morgan, Professor of Experimental Zoology at Columbia University, spoke on "Which Theory of Evolution Applies to Man."

The list of elections with basis of election is given below:

ELECTED AS ACTIVE MEMBERS

FROM THE FACULTY

ARTHUR BYRON COBLE, A.B., A.M., Ph.D.

Mathematics

Symmetric Binary Forms and Involutions. *Am. Jour. Math.* 31 (1909), 32 (1910). The Reduction of Sctic Equations to the Valentiner Form Problem. *Math. Annalen* 70 (1910). An Application of Moore's Cross-ratio Group to the Solution of the Sctic Equation. *Trans. Am. Math. Soc.*, 12 (1911). An Application of Finite Geometry to the Characteristic Theory of Odd and Even ? fcns. *Trans. Am. Math. Soc.*, 14 (1913). Restricted Systems of Equations. *Am. Jour. Math.*, 36 (1914). (Also other papers.)

WILSON FORSYTHE MONTFORT, A.B., A.M.

Chemistry

The Water Supply of St. Louis. Report of the Water Commissioner, 1913. Note on Ortho-Tolidin Test for Free Chlorine. *Jour. Am. Water Works Assoc.*, Vol. 1. No. 4, Dec. 1914. Dry Feed of Chemicals in Water

Purification. Jour. Amer. Water Works Assoc., Vol. 2, No. 1, March, 1915. Notes on Water Purification at St. Louis. Presented at Amer. Water Works Assoc. (Also other papers).

JAMES THERON ROOD, B.S., Ph.D.

Railway Engineering

Vibrations of Telephone Diaphragms. A study of the Relation Between Tension and Magnetic Permeability. A. A. S. Meeting, Columbia University, Dec. 29, 1916. Resume of same, Electrical World, Jan. 1917.

FROM GRADUATE STUDENTS

JOHN BERNIS BROWN, B.S., M.S.

Chemistry

The Body Fat of the Common Woodchuck, *Marmota monax*. Read at the Boston Meeting of the Am. Chem. Soc., Sept., 1917. The Fat of the Striped Pocket Gopher. Read at the Boston Meeting of the Am. Chem. Soc., Sept., 1917. Synthesis of Pure Fatty Acids. Chemical War Problem, N. R. C. No. 112.

GEORGE BLACKLANE CLAYCOMB, Ph.B., M.S.

Zoology

Petrie Dish Projects. Habits of *Heteroceris* Beetles. A Wave of Life. Distribution and Abundance of *Entomotraca* in Flathead Lake (Montana). Animals of Milk Weed—thesis for M.S.

CHARLES WILLIAM COLVER, B.S., M.S.

Chemistry

The Composition of Irrigated and Non-Irrigated Apples. By J. S. Jones, C. W. Colver, The Jour. of Agr. Sci., 5, 424 (1913). Dry Farmed and Irrigated Wheat. J. S. Jones, C. W. Colver, Bull. 88, Idaho Exp. Sta. Synthesis of Anthracene—thesis for Ph.D. (Also other papers).

HERBERT E. FRENCH, B.A., A.M.

Chemistry

Oxalyl Chloride as a Reagent in Organic Chemistry. Preparation of Aromatic Acid Anhydrides: Reaction with Alcohols. Jour. Am. Chem. Soc. 40, 424 (1918).

ARTHUR GUSTAV GEHRIG, B.S.

Civil Engineering

Effect of Heat Treatment on the Fatigue Strength of Alloy Steel—thesis for M.S.

EZRA CLARENCE HARRAH, A.B.

Zoology

Studies on Monostomes A—thesis for Ph.D.

LLOYD BELSFORD HOWELL, A.B., M.S.

Positive Halogen in Organic Compounds. Iodine in Diiodoacetylene and Iodochloroethylene—thesis for Ph.D.

WARREN A. RUTH, A.B., A.M.

Botany

Field Experiments in Spraying Apple Orchards. Ill. Agr. Exp. Sta. Bull. 185: (1916). Fertilizer Problems and their Relation to Quantities, Size and Quality of Fruit. Trans. Ill. Hort. Soc., 46, 64-74, 1912. Chlorophyll Content of Leaves—thesis for Ph.D. (Also other papers).

ERNEST R. SCHULZ, B.A., M.S.

Agronomy

Chemical and Physical Composition of the Corn Kernel as Affected by Crossing—thesis for Ph.D.

- HERBERT AUGUST WINKELMANN, B.S., M.S. *Chemistry*
 The Determination of Organic Compounds in Low Concentration—
 thesis for Ph.D.

ELECTED AS ASSOCIATE MEMBERS

GRADUATE STUDENTS

- DOROTHY J. CASHEN, B.A. *Botany*
 The Relation of Evaporation to Plant Succession—senior thesis.
- GEORGE HOPKINS COLEMAN, B.A. *Chemistry*
- MARGARET KATE DAWSON, A.B. *Physics*
- WILLIAM E. EDINGTON, A.B. *Mathematics*
- RALPH DANIEL REED, B.S. *Geology*
- JOSEPH B. ROSENBACH, A.B. *Mathematics*
- MARCENA E. RUSSELL, B.A. *Mathematics*
 Actuarial Study of Health Insurance for a Large Department Store—
 thesis for M.A.
- ARSHAG K. SUEIRIAN, A.B. *Zoology*
- ESTHER A. WAGNER *Bacteriology*
 A Study of Bacteria in Well Waters—thesis for M.A.

SENIORS

- CLARENCE EHNI BROEKER *Chemical Engineering*
 Conductivity of Dilute Aqueous Solutions of Hydrochloric Acid—senior
 thesis.
- ARTHUR DAVID CASKEY *Electrical Engineering*
 Characteristics of Vacuum Tubes for Radio-Telegraphy—senior thesis.
- GERALD J. COX *Chemistry*
- R. W. DAWLEY *Chemistry*
 Transference in Dilute Amalgams of the Alkali Metals—senior thesis.
- WILLIAM F. EINBECKER, B.S. *Chemistry*
 Examination of Zinc Flue Dust for Rare Elements—senior thesis.
- P. M. GINNINGS *Chemical Engineering*
 The Synthesis of Cyclic Esthers—senior thesis.
- JOSEPH D. GREEN *Psychology*
 Mental and Motor Ability of Adolescents—senior thesis.
- JOSEPH L. HALL *Chemical Engineering*
 Transference Numbers of Sodium and Potassium in Mixed Chloride
 Solutions—senior thesis.
- E. T. HOWELL *Chemical Engineering*
 Studies in Furane Series—senior thesis.

JOHN R. JOHNSON

Chemistry

HOWARD AUGUSTUS MEYERHOFF

Geology

ELEANOR E. MUTH

Home Economics

Diabetes Mellitus, its Dietetic Treatment and its Relation to Glycuresis—
senior thesis.

RALPH S. SCHNEIDER

Chemistry

The Heats of Dilution of Certain Salt Solutions—senior thesis.

MADLINE SLOAN

Home Economics

The Value of Vegetable Protein for Maintaining the Hydrogen Equilibrium of the Body—senior thesis.

A. F. THAL

Chemical Engineering

A Study of the Preparation of Glycols—senior thesis.

ERNEST WILLIAM THIELE

Chemical Engineering

The Extraction of Caesium and its Compounds from Pollucite—senior thesis.

MARIE WESSELS

Zoology

Nasal Structure of a Lizard—senior thesis.

E. H. WILLIAMS, *Secretary.*

CHICAGO CHAPTER

ELECTED FEBRUARY 25, 1919

HELEN JEANETTE ALLEN

Zoology

Glycogen in Chick Embryo.

HERBERT BELL

Mathematical Physics

Mathematical Tables, Napier tercentenary handbook. Text book on Spherical Trigonometry. Spectral series and Atomic Number.

Clyde John Bollinger

Geography

Working on an important geographic problem of Southern Michigan.

AMANDO CLEMENTE

Chemistry

The Detinning and Analysis of Tin Plate. Dezincing and Analysis of Galvanized Iron (with Mr. Heise). Adsorption in Charcoal.

LILLIE EICHELBERGER

Chemistry

A Colorimetric Method for the Determination of Dinitro-oxyphenyl
arsinic Acid in Mononitro-oxyphenyl arsinic Acid.

Dwight Tarbell Ewing

Chemistry

Action of Trioxymethylene on Paraxylylene in the presence of Anhydrous Aluminum Chloride (with R. C. Huston). Density of Solutions of Lithium Iodide. Surface Tension of Hydrocarbons and of Dichlorodiethyl Sulphide (mustard gas oil). Adsorption at the surface of Charcoal.

ANANT MADHAV GURIAR

Botany

Method (improved) for CO₂ Resp. of stored wheat.

- ARTHUR WING HAUPT *Botany*
A Morphological study of *Pallavicinia Lyellii*. The life history of *Fossombronina cristula*.
- MARIE AGNES HINRICHS *Zoology*
Effect of Alkaloids on *Planaria dorotocephala*.
- HIKOKURO HONDA *Zoology*
Spermatogenesis of Aphids. Life History of some free living Nematodes.
- JACOB ROBERT KANTOR *Psychology*
Conscious Behavior of the Abnormal. Psychology as Science of Evolution. Human Personality and its Pathology.
- HELEN LOIS KOCH *Psychology*
Influence of Extraneous Controls in Learning.
- ELMIRA LODOR *Psychology*
Mental Control of the Involuntary Start.
- GEORGE ELMER MILLER *Organic Chemistry*
Research on the separation of optical isomers in the four-carbon-atom saccharinic acids.
- FREDRIC MAX NICHOLSON *Anatomy*
Cytology of Nerve Cells.
- DEAN ALVIN PACK *Botany*
Two Ciliata of Great Salt Lake. Germination and After-ripening of *Juniperus*.
- HAZEL MARGUERITE SCHMOLL *Botany*
Ecological survey of a portion of Cook County, Illinois.
- HAL W. SHERMAN *Pathology*
Articles on immunological subjects.
- ARTHUR WARE SLOCOM *Paleontology*
A list of Devonian Fossils Collected in Western New York, with notes on their Stratigraphic Distribution. *Hypsocrinus*, a new Genus of Crinoids from the Devonian (with F. Springer). New Crinoids from the Chicago Area. New Echinoids from the Ripley Group of Mississippi. New Trilobites from the Maquoketa beds of Fayette County, Iowa.
- KARL THEODOR STEIK *Chemistry*
Has published work on Cements while at University of Wyoming. Ph.D. candidate—research now in progress.
- EDWARD JULIUS STIEGLITZ *Anatomy*
Research on Kidney.
- PERRY DANIEL STRAUSBAUGH *Botany*
Engaged in a critical study of the Stellar Structures in *Smilax*.
- HARRY BENJAMIN VANDYKE *Anatomy*
Cytology of Neuroglia Cell.

CHESTER KEELER WENTWORTH***Geology***

A Proposed Dip Protractor. Experimental Study of Erosion of Cobbles in Transit. Experimental Study of Elastico-Viscous Flow in Ice.

ELECTED TO ASSOCIATE MEMBERSHIP

EVERETT NAUGHTIN COLLINS

JULIUS BAHR KAHN

PHILENA ANNE YOUNG

ELECTED MAY 15, 1919

STEWART BASTERFIELD

Chemistry

Research on Derivations of Urea Esters.

FLORENCE MAY BRUMBACK

Botany

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GLADYS ELIZABETH CARSON GIBBENS

Mathematics

Research started: "Osculating Algebraic Functions."

FREDERICK ORVILLE GROVER

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WERNER CHARLES ZAHN

Geography

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- ARTHUR WING HAUPT *Botany*
A Morphological study of *Pallavicinia Lyellii*. The life history of *Fossombronina cristula*.
- MARIE AGNES HINRICHS *Zoology*
Effect of Alkaloids on *Planaria dorotocephala*.
- HIKOKURO HONDA *Zoology*
Spermatogenesis of Aphids. Life History of some free living Nematodes.
- JACOB ROBERT KANTOR *Psychology*
Conscious Behavior of the Abnormal. Psychology as Science of Evolution. Human Personality and its Pathology.
- HELEN LOIS KOCH *Psychology*
Influence of Extraneous Controls in Learning.
- ELMIRA LODOR *Psychology*
Mental Control of the Involuntary Start.
- GEORGE ELMER MILLER *Organic Chemistry*
Research on the separation of optical isomers in the four-carbon-atom saccharinic acids.
- FREDRIC MAX NICHOLSON *Anatomy*
Cytology of Nerve Cells.
- DEAN ALVIN PACK *Botany*
Two Ciliata of Great Salt Lake. Germination and After-ripening of *Juniperus*.
- HAZEL MARGUERITE SCHMOLL *Botany*
Ecological survey of a portion of Cook County, Illinois.
- HAL W. SHERMAN *Pathology*
Articles on immunological subjects.
- ARTHUR WARE SLOCOM *Paleontology*
A list of Devonian Fossils Collected in Western New York, with notes on their Stratigraphic Distribution. *Hypsocrinus*, a new Genus of Crinoids from the Devonian (with F. Springer). New Crinoids from the Chicago Area. New Echinoids from the Ripley Group of Mississippi. New Trilobites from the Maquoketa beds of Fayette County, Iowa.
- KARL THEODOR STEIK *Chemistry*
Has published work on Cements while at University of Wyoming. Ph.D. candidate—research now in progress.
- EDWARD JULIUS STIEGLITZ *Anatomy*
Research on Kidney.
- PERRY DANIEL STRAUSBAUGH *Botany*
Engaged in a critical study of the Stellar Structures in *Smilax*.
- HARRY BENJAMIN VANDYKE *Anatomy*
Cytology of Neuroglia Cell.

CHAPTER REPORTS

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CHESTER KEELER WENTWORTH

Geology

A Proposed Dip Protractor. Experimental Study of Erosion of Cobbles in Transit. Experimental Study of Elastico-Viscous Flow in Ice.

ELECTED TO ASSOCIATE MEMBERSHIP

EVERETT NAUGHTIN COLLINS

JULIUS BAHR KAHN

PHILENA ANNE YOUNG

ELECTED MAY 15, 1919

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LIST FURNISHED BY THE CORRESPONDING SECRETARIES OF THE CHAPTERS

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Union.....	Ernest J. Berg....	Morland King....	Mortimer F. Sayre..	*	Mortimer F. Sayre
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Columbia.....	James K. Finch...	Walter I. Slichter	Harold A. Foles....	*	Harold A. Fales..
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Michigan	E. C. Case.....	A. M. Barrett....	H. A. Gleason.....	*	H. H. Higbie....
Illinois.....	William T. release.	Charles T. Knipp..	E. H. Williams....	*	B. Smith Hopkins.
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Northwestern...	David R. Curtiss..	W. G. Waterman..	Henry H. Babcock..	*	O. A. Randolph..
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Wisconsin.....	C. I. Corp.....	W. J. Mead.....	E. G. Hastings....	*	Henry F. Mehl...
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Washington Univ.	E. L. Ohle.....	Joseph Erlanger...	M. W. Lyon, Jr....	*	J. M. Greenman..
Dist. of Columbia	C. L. Shear.....	H. L. Shantz....	Charles E. Galt.....	F. L. Whitney....	D. R. Harper, 3rd.
Texas.....	Edward L. Dodd...	A. A. Bennett....	F. A. Perrin.....	Goldie P. Horton..	H. J. Ettinger....

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Tenth (Baltimore) Convention. 1909. Pamphlet. 6 pp.

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Twelfth (Minneapolis) Convention. 1910. Pamphlet. 27 pp.

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Vol. VII

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